ABSTRACT OF THE INVENTION

A specific dosage regimen of buprenorphine achieves pain relief from painful episodes due to sickle cell disease. The dosage regimen comprises administering to a patient in need of pain relief from sickle cell disease at least one BTDS transdermal patch. Alternatively, the dosing regimen comprises administering to the patient (1) a first buprenorphine-containing transdermal dosage form for a first dosing period; (2) administering to the patient a second buprenorphine-containing transdermal dosage form for a second dosing period, where the second dosage form comprises the same dosage of buprenorphine as, or a greater dosage of buprenorphine than, the first dosage form; and (3) administering to the patient a third buprenorphine-containing transdermal dosage form for a third dosing period, where the third dosage form comprises a greater dosage of buprenorphine than the second dosage form.